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Question Paper Code: 21557

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Third Semester

Mechanical Engineering

ME 2201/ME 32/10122 ME 302/PR 1204/080120005 — MANUFACTURING TECHNOLOGY – I

(Common to Industrial Engineering and Industrial Engineering and Management)

(Regulation 2008/2010)

Time: Three hours

Maximum: 100 marks

Answer ALL questions.

PART A — $(10 \times 2 = 20 \text{ marks})$

- 1. Compare the advantages of metal moulds over sand (expendable) moulds.
- 2. What are the functions of flux in melting metals and alloys?
- 3. What is the minimum distance maintained between two successive spot welds made by resistance welding? Why?
- Write short notes on transferred and non transferred arc in plasma arc welding.
- 5. What is ironing?
- 6. What is meant by fullering?
- 7. Define spring back.
- 8. Why is it necessary to provide proper clearance between the punch and die in a shearing operation?
- 9. What is polymerization?
- 10. What is calendaring in processing of plastics?

PART B — $(5 \times 16 = 80 \text{ marks})$

- 11. (a) (i) What are the allowances given while making pattern? Explain. (8)
 - (ii) Describe the process of Investment casting. What process controls are needed in this case? (8)

Or

	(b)	(i)	Briefly explain the Principle, operation, advantages, disadvantage and application of CO2 moulding.	es (8)
		(ii)	Give its Advantages and fainteations.	CONT.
12.	(a)	(i)	transformer.	COX
		(ii)	Explain the three variables involved in Continuous drive frictivelling.	on (8)
			Or	
	(b)	(i)	What are the nondestructive tests used in welding inspection Explain any one method.	n? (8)
		(ii)	Explain with a neat sketch the Equipment and process	of (8)
13.	(a)	(i)	Briefly explain about seamless rolled ring forging.	(8)
+41	576	(ii)		(8)
		2500	Or	
	(b)	(i)	Explain Hot working and Cold working with their advantages a limitations.	nd (8)
		(ii)	Explain with a neat sketch the process of wire drawing.	(8)
14.	(a)		Explain the basic nomenclature of tube bending with a sim sketch.	ple (8)
		(ii)	Discuss Super plastic forming with necessary sketches.	(8)
		(Las)	Or	
	(b)	(i)	What are the different types of stretch forming? Explain any one.	(8)
	(6)	(ii)		etic (8)
15.	(a)	(i)	What is rotational moulding? State its advantages and limitation	ons. (8)
		(ii)	Explain briefly any two bonding methods of thermoplastics.	(8)
		(44)	Or	
	(b)	blo	plain briefly with neat sketches two commercially used method ow moulding for blowing of plastics bottles and mention their spec- vantages.	s of cific (16)